

## Montana Board of Oil and Gas Conservation Environmental Assessment

**Operator:** Enerplus Resources (USA) Corporation  
**Well Name/Number:** Porky-Harold 9-13-HSU  
**Location:** SW SW Section 9 T24N R54E  
**County:** Richland, MT; **Field (or Wildcat):** Wildcat

### Air Quality

(possible concerns)

Long drilling time: No, 25-35 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick rig to drill a single lateral Bakken Formation horizontal well, TVD 9,692'/MD 15,925'.

Possible H2S gas production: Slight chance of H2S.

In/near Class I air quality area: No, Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, if productive, DEQ air quality permit required, under rule 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sweet gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Existing pipeline for gas in the area. No concerns.

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### Water Quality

(possible concerns)

Salt/oil based mud: Yes to intermediate string and horizontal lateral will be drilled with oil based invert drilling fluids. Surface casing hole to be drilled with freshwater and freshwater mud.

High water table: No, high water table expected.

Surface drainage leads to live water: Yes, nearest drainage is an unnamed ephemeral tributary drainage to West Charlie Creek, about 1/4 mile to the west and 1/4 of a mile to the east is West Charlie Creek from this location. Stock pond appears to be built in this part of West Charlie Creek about 1/4 of a mile to the northeast of this location.

Water well contamination: No, closest stock water well is about 3/8 of a mile to the northeast of this location and is only 40' in depth. Surface hole in this well will be drilled with freshwater and freshwater mud system. Steel surface casing will be run and cemented to surface from 1627' to protect groundwater. No concerns.

Porous/permeable soils: No, silty sandy clay soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 1627' +/- surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent any problems.

### Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None, only ephemeral drainages.

High erosion potential: No, location has a moderate cut of 15.8' and a moderate fill of 18.3', required.

Loss of soil productivity: None, location to be restored after drilling well, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large well site 430'X300'.

Damage to improvements: Slight, surface use appears to be grazing land.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☒ Other: Requires DEQ General Permit for Storm Water Discharge Associated with

Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, #301. About 3,785' of new access road will be built from existing county road, #301, into location. Cuttings will be disposed of in lined reserve pit. Pit will have the liner folded over the cuttings and the pit backfilled with subsoils. Oil based drilling fluids will be recycled. Completion fluids will be hauled to a commercial Class II disposal. No concerns.

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about 3/8 of a mile to the northeast from this location.

Possibility of H2S: Slight chance of H2S.

Size of rig/length of drilling time: Large triple drilling rig and 25 to 35 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: 1627'+ is adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Distance sufficient to mitigate noise.

### Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened by the USFWS are Pallid Sturgeon, Interior Lease Tern, Piping Plover and Whooping Crane. Species listed as candidate species are the Greater Sage Grouse and Spragues Pipit. NH tracker website for this Township and Range lists no species of concern.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: \_\_\_\_\_

Comments: Private surface lands. Location is not near any river. Threatened species should not be a concern at this wellsite. No concerns.

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### Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

avoidance (topographic tolerance, location exception)

other agency review (SHPO, DSL, federal agencies)

Other:

Comments: Private surface lands. No concerns.

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### Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: Development well, fourth well in this spacing unit. No concerns.

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### Remarks or Special Concerns for this site

Fourth Bakken horizontal well in this spacing unit.

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### Summary: Evaluation of Impacts and Cumulative effects

A single lateral Bakken Formation horizontal well, TVD 9,692'/MD 15,925'. No long term impacts expected. Some short term impacts will occur.

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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title): Chief Field Inspector

Date: January 6, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center website

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(Name and Agency)

Richland County water wells

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(subject discussed)

January 6, 2011

(date)

USFWS Threatened and Endangered Species in the Mountains-Prairie website

(Name and Agency)

Threatened or Endangered Endanger species

(subject discussed)

January 6, 2011

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T24N R54E

(subject discussed)

January 6, 2011

(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_